

Comments on Water Plan Investment Guide. September 30, 2003 draft.
Carolyn Yale, EPA
415-972-3482

Executive Summary:

1– Last paragraph: I find the sentence on groundwater overdraft vague (“incomplete information on how much and where”). Surely this summary on overdraft could draw on text from the new Bulletin 118 update to suggest that although there is incomplete information on the geographical extent and amount, certain areas are particularly at risk and trends, if not checked, indicate that other basins would be subject to overdraft in the future. (See for example, p. 2 of findings in Bulletin 118.)

2- Point #10: “Environmental water needs have not been adequately identified and quantified in many regions. In some cases, existing environmental requirements established through state and federal authorities are not being met. With State leadership, environmental water needs must be quantified and met through a variety of water management strategies.”

Comment: The current language refers to the need to quantify and meet “existing unmet environmental requirements.” It is easy to interpret this as limited to existing State Board and other requirements, such as FERC, which is too restrictive.

Chapter 1:

1-2: Second paragraph. As noted above, I have problems with the term “environmental water requirements,” which I suspect in this paragraph refers to requirements such as those in State Board permits and FERC licenses. This understanding of environmental water needs is too limiting. Further, the generalization regarding environmental water in this paragraph is incorrect. Looking at the unmet flow objectives which Environmental Defense has submitted, there are a number of streams with deficiencies even in wet and above normal years.

My take: Environmental water needs, on which quantified objectives are based, should be identified with reference to maintaining and restoring the natural hydrologic and ecosystem functions of a stream/river. Flow regimes should track a natural hydrograph to the greatest extent possible. Even if there is not sufficient information at this time to characterize and quantify environmental water needs for California’s many streams, these principles should guide future work; the state should commit to promoting this work (through various responsible state agencies) and overseeing regional planning and projects to ensure that they contribute to characterizing, quantifying, and implementing environmental water needs.

This topic of environmental water needs reappears on page 2-3. On this page of chapter 2 there should be a separate paragraph on existing environmental water needs, making use of the available ED information, information from the FWS on refuge water supplies, information regarding the Salton Sea, and information from the Central Valley Habitat Joint Venture regarding managed wetland water supplies (Bob Shaffer, FWS: 916-414-6459).

1-10: First sentence on public trust: Doesn't responsibility regarding the public trust inhere in the State, although this responsibility may be carried out through various agencies of the state? Just simplify the sentence, such as, "Public trust protection is a key State responsibility."

Chapter 2:

2-3: See above on environmental water needs paragraph.

2-4: Provide brief mention in text or box of agencies in addition to the USACE which help with flood management. (See comments on Chapter 3, below.)

2-6: Small oversight last paragraph, "Collectively, California farms, urban businesses, and millions of individual households fund...." (Maybe the farm/business distinction is confusing, but somehow we need to factor in urban commercial and industrial users.)

2-15: Minor edit in "contamination" paragraph: "This drainage water, which picks up salts and other contaminants from the soil, can create...."

(One can think of a number of contaminants which occur in soils or are bound to sediments.)

2-20: Consider broadening the funding issue to capture the earlier observation (in the text) that for the foreseeable future we cannot expect major infusions of state and federal funding; hence, there is need to rethink funding mechanisms, including more rigorous reliance on beneficiary payments, and more efficient use of regional resources. Among the programs affected is CALFED, as you note.

2-21: On "new surface storage": As you say, most of the best opportunities have been used already. Is it possible we're overlooking the future importance of improving use of our existing storage investments through integrated reoperation of facilities within and between watersheds, retrofits (everything from expansions to adjustments allowing for better downstream fish conditions...), and the like?

Chapter 3

3-12: Water quality concerns: I note that for this section there are not recommendations, as there are for some other topics. We do of course have a variety of water quality recommendations scattered elsewhere in the document, and I assume that there can be some consolidation and check for thorough coverage. We may not want to place recommendations in Chapter 3, but could provide a reference to recommendations located elsewhere. TO DO soon.

Hydrologic events/ flood events: This chapter introduces an interesting (if long) discussion of flood events without providing here, or elsewhere, information on the agencies and infrastructure which deal with flood events. I have two suggestions:

In Chapter 2, roles in water management, insert short text on how federal and state agencies (DWR, USBR, COE) and the facilities with flood storage functions have flood management responsibilities.

Chapter 3: With reference to the topic of Flood and Flood Plain Management, there needs to be explanatory text on the institutional context for recommendations (wherever they are

ultimately located). This would include agencies involved in flood event management and those, such as the Reclamation Board, with specific regulatory responsibilities. Perhaps all that is needed is a sidebar.

3-30 to 3-52: Future scenarios and response packages: As a general comment, I **question** the value of including this scenario/response material in the current draft. The logic of scenario construction and response testing is unclear* and detracts from important information about key uncertainties. I would recommend deleting the specifics on the scenarios, through page 3-52 (picking up with the “next steps” topic). If further work on scenarios is in fact anticipated in the next Plan phase, the overall approach could be briefly described. Information about analytical tools, technical information needs, and potential ranges of future “demands,” including environmental water needs could be provided without specific scenario/response constructs.

* For example, it seems to me that a number of conditions embedded in the scenarios presuppose— or have preselected-- certain types of responses. It also seems that the scenarios describe desired outcomes rather than key exogenous variables which create conditions against which responses can be tested.

Chapter 4:

4-16: Regarding assisting regions through loans and grants: “The state should clearly articulate the advantage that regional planning could give regions in competing for loans and grants. **Criteria to qualify and compete for assistance should be framed to give incentives to regional efforts...**”

San Joaquin Hydrologic Region:

4-58: The generalization that the Mokelumne, Merced, Stanislaus, Tuolumne, and San Joaquin rivers have “significant instream flow requirements” should be more specific, as information is available, reflect where/when the instream flow requirements are in place and whether they are met. In what sense are there “significant instream flow requirements” on the San Joaquin? Does this refer to requirements to meet water quality standards at Vernalis? Under most conditions, the mainstem San Joaquin is flow-deficient, to say the least.

4-59: First paragraph, State of the Region. Salt build-up and drainage management are arguably as much a concern as the “reliability” of supplies from an (implied) quantity perspective. I would add: **Additionally, significant salt loads in water imported from the Delta and the need for drainage management in extensive agricultural areas are a concern for the long-term viability of agricultural use.**

Second paragraph: The discussion of groundwater would benefit from the additional perspectives of quality (e.g., salts and selenium) and, for agriculture in the valley floor, drainage management.

Fourth paragraph (“One of the major challenges...”): **The river’s salmon population, once numbered in the hundreds of thousands, has severely declined in the tributaries and mainstem San Joaquin below the confluence with the Merced, and has been completely eliminated in the San Joaquin above the Merced confluence. Restoring continuous flow to the San Joaquin River from Friant Dam downstream...**

Fifth paragraph: I’m going to assume that “[t]he major water quality problems of San Joaquin Valley streams ...” will refer to mainstem and tribs, collectively, in which case I would recommend the following details: **“The major.... are a result of depleted freshwater flows; significant salt loads**

in agricultural drainage and runoff; municipal and industrial wastewater discharges; and other pollutants associated with agricultural irrigation and production including nutrients, pesticides, selenium, and boron.”

4-60: There are three interrelated topics which should be addressed in the “future” for this region: water supply reliability, water quality, and ecosystem restoration. Water quality should say something along the lines of: **The sustainability of important beneficial uses such as agriculture, and fish and supporting aquatic habitat depends on improvements in water quality. Alongside local water users and suppliers, the Central Valley Regional Water Quality Control Board is proceeding with several programs to target and implement effective pollution control measures. These include establishing TMDLs for salinity and boron, dissolved oxygen, and OP pesticides; and managing discharges from irrigated lands.**

4-61: Paragraph 1: The Grasslands Bypass project has been in effect for several years, most recently renewed in 2001. Edit the paragraph accordingly: **“The Grasslands Bypass Project on the westside of the valley consolidates the conveyance... and utilizes a portion of the San Luis Drain to convey drainflows around the Grasslands wetlands. A State Waste Discharge Requirement for this project sets targets for reduced selenium loads.”**

Missing information on page 4-61: There is no mention of the remarkable Grasslands Ecological Area and associated refuges, notably the San Luis Refuge complex.

4-67 (or thereabouts): Do you have information on the extent to which the major metropolitan areas such as Bakersfield and Fresno rely on groundwater at present? That would provide better perspective on the challenges of future water management in the region.

4-105: First paragraph: The last sentence (on ag interests’ concerns) is an example of a reporting approach which, frankly, I don’t think belongs in this document, at least in this location. Maybe ecosystem restoration or other projects alluded to threaten agricultural lands, maybe they don’t to a significant degree. If agricultural land conversion is the concern, the duty of this report is to provide a fact-based perspective, not a stakeholders’ perception perspective. With that, what is the more complete picture of threats to agricultural lands? What about urban and recreation-related development as well?

5-22: First full paragraph. The text discusses potential objectives for conjunctive management, citing water quality protection among them. Since the connection may not be transparent to the lay reader, a sidebar with examples of ways in which conjunctive management can serve objectives such as wq would be helpful (managing salt water intrusion? managing shallow groundwater, as in the San Joaquin Valley?....?).

5-28: Cross reference recommendations related to recharge area protection.

5-32-33: Under the description of commitments of the CALFED Conveyance Program: The message could be simplified by focusing on those key elements of the list which are directly related to conveyance. Some of the items listed here, while administered through the Conveyance Program, could more readily be associated with other programs– for instance, the Old River and Rock Slough Water Quality Improvement Projects (drinking water quality), the water quality exchanges, the San Luis lowpoint alternatives (again, drinking water quality), and the Comprehensive Study. Again, to

simplify, I'd recommend highlighting the basic features of the South Delta Improvements proposal, the DCC/through-Delta facility evaluation, North Delta, and the Intertie.

5-56: The following suggestions for the economic incentives text went directly to Ray Hoagland: For those of us who aren't well versed in ag-related water charges (and the various entities which apply them), it might be helpful to provide a little detail (sidebar?), perhaps by way of example, on the kinds of costs which might be folded into ag water rates by a representative agricultural water management agency -- if there is such a thing. Or by the various agencies which are paid for ag water services (supply, drainage...?). Would the Pajaro Valley Water Management Agency be a good example?

When I listen in on ag discussions about costs associated with water management, I hear references to the various supply costs (capital investment, O&M,...), drainage service, costs for water quality monitoring, for water use measurement (maybe these two are folded into the supply and/or drainage services), and in some cases other fees. The text pp. 5-55 to 56 gives the sense that the "model" was largely urban; perhaps I am mistaken. Is there some way of clarifying the types of costs typically included in water management payments by agriculture?

Other minor comments:

5-56: State-managed grants and loans, last sentence, can also cover watershed and water quality planning and implementation.

5-59: Social considerations. Getting back to the question of what is included in costs for agricultural water, I think of it as not only "supplies" but other costs such as monitoring, use measurement, and drainage. Maybe just delete "supplies"-- or make it clear what's encompassed by "supplies."

5-84: Salinity. Middle of paragraph: "The primary tool **for** reducing salinity **impacts** is matching water quality to its use..." (Matching doesn't reduce salinity per se.)

5-87: Current Status paragraph, second sentence. Point sources aren't limited to pipeline discharges, but pipes are an example. Hence, you could say, "(for example, from pipes)"....

If you're interested, here's a formal definition of a point source: "Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff." And of course it's possible to go deeper into case law (e.g., the recent forestry decision).

5-93: First bullet under "recommendations": After identifying in the preceding paragraph the shortcomings of pollutant-by-pollutant water quality management, the first recommendation would be stronger if it omitted the reference to this approach and instead endorse a watershed-based "source-to-tap" approach as an effective approach to integrating and prioritizing pollution prevention activities. For example, **"Using watershed-based 'source-to-tap' strategies can be an effective way of integrating and prioritizing pollution prevention activities."**

5-94: Second bullet (on an Interagency Water Quality Program): This is an excellent idea, possibly modeled on the IEP (?). If something like IEP is the model, it would help to give more recognition to the shared role of non-state agencies. How about, "State agencies.... **should take the lead in establishing** an Interagency...."

We need to think harder about how such activities could be financed.

5-103 ff: Recharge area protection. I appreciate the efforts that have gone into this but am not satisfied with the product yet. I've sent some questions out to EPA people who helped earlier and will try to track down responses asap (before week's end). If possible, I/we will provide rewrite language.

This isn't my area of expertise, but here are some of my concerns:

It's my understanding that there are natural recharge areas which may or may not be managed by agency water districts. The first part of the text— current recharge areas, page 5-104— limits discussion to formally managed sites; is there something to be said about other areas?

5-105: Consider converting some of the costs of not protecting into benefits of protecting (avoided costs), to simplify.

Regarding the costs to institute and manage recharge area protection, is it necessary to limit the options to purchase and incorporation into a water management agency? Isn't it conceivable that a range of options could include: full purchase; easement; land use regulation to avoid site uses and design which would restrict infiltration or introduce pollutants? There are certain costs associated with these strategies. However, I question including the types of fiscal impacts (tax revenues) and income effects mentioned here.

5-107: Issues. These need to be sorted out. The cut I would propose is (no special order): Need for appropriate land use planning and zoning; coordinating local land use planning/regulation with state and federal aquifer protection programs; need for better information characterizing recharge areas; education about the benefits of protection and costs of failure to act; in managed recharge areas, issues associated with quality of recharge water (e.g., guidelines); managing for vectors/odor or other impacts of formal recharge areas.

5-121: Second paragraph. Delete the confusing sentence, "The timing and size limitations...."

5-122: Paragraph starting, "In the ROD..." The CALFED Program and ROD do not have flood control objectives, except as the subject applies to managing conveyance and levees in the Delta. With respect to the five storage investigations, there may now be flood control considerations, but these do not derive from (nor were they analyzed in) the CALFED PEIR/EIS and ROD. So, "...ability to contribute to CALFED's ecosystem, water quality, and water supply objectives."

5-131: Top paragraph. For clarity, I would say, "As both environmental **restoration** and urban uses have grown...." It's not clear that overall environmental uses have grown (the dedicated water versus "in the environment" water use question, again).

5-137: Examples of system reoperation, first bullet, add "**or managing for water quality.**"

More on the Scenarios, Chapter 3: As stated above, I strongly recommend deleting the scenarios from the current draft. If this does not occur, here are some specific comments:

3-33: Environmental water flow: The Plan should acknowledge that there is incomplete information on the water needed in the environment to adequately sustain hydrologic and ecosystem functions, and also incomplete information on existing environmental water supplies (whether dedicated, or not). The text needs to explain that information on water as it occurs in the environment is not represented here; rather, the quantification represents water that we intend to “apply” or “dedicate” to the environment. The text should also explain that basis for environmental flow targets (needs) is imperfect but can be improved by better restoration science, monitoring and study of environmental conditions and responses.

Recommended revisions for the scenario discussion: “Environmental water”: There are two components to environmental water estimates. Flow-based:.... These estimates do not account for all flows which occur in California streams and may not capture the full extent of environmental flow needs. Land-based:.. native vegetation water use is not quantifiable at this time. Although water flows contribute to environmental conditions, these flows are not in themselves indicative of overall conditions.

3-35: Regarding irrigated agriculture, identify assumptions regarding management of drainage-impaired lands. Does this scenario assume that some form of drainage management is implemented in the San Joaquin region? (If this hasn’t been considered, the Scenario 1 approach might track the water quality conditions, which would suggest “no comprehensive program/limited local investments in drainage management. ”) Note that the December 2002 San Luis Drainage Feature Re-evaluation estimated that without action, up to 379,000 acres could go out of production in the long term. This has implications for water supply allocation and water quality.

3-36: Water Quality: The bullet discussing impacts of “reduced surplus inflow and greater reuse of water upstream” should be modified slightly: “Some decrease in **flexibility** to meet Delta water quality standards....”

3-37: Second bullet: “Construction of vast amounts of **impervious** surfaces, such as roads...”

3-38: Environment: See my earlier note on information for high environmental water objectives. This provides detail consistent with the CVPIA.